
PHASE II

ALTERNATIVE DESCRIPTIONS

The CALFED Bay-Delta Program staff are developing a set of alternative descriptions for evaluation in Phase II of the Program. The alternatives are designed to represent a broad range of potential solutions to problems in the Bay-Delta system. Three sample alternatives from this set are shown on the following pages. **More detailed descriptions of these will be available before the April 10th BDAC meeting.**

The reader should keep several considerations in mind as the alternatives are reviewed:

- Each alternative is structured around a set of common programs that remain relative constant between the alternatives. Each program was designed with potential linkages in mind so they each contribute in multiple ways towards achieving the Program goals.
- Each alternative includes an array of specific actions to provide a comprehensive solution to the Bay-Delta problems for ecosystem quality, water quality, levee system vulnerability, and water supply reliability.
- The physical differences between the alternatives lie mainly in the method of transporting water through or around the Delta, and the amount of additional water storage included with each alternative.
- While the makeup of the common programs remain relatively constant, they may perform differently depending on the storage and conveyance included with an alternative. For example, the water quality program focuses each alternative on reducing water quality parameters of concern before the parameters enter the Bay-Delta system. The addition of storage in some alternatives may provide additional opportunity to manage flow and diversion timing to the benefit of water quality.
- The impact analysis for Phase II of the Program will further define the benefits and impacts of each alternative.
- The final preferred alternative resulting from the Phase II process will require a set of institutional assurances to complete the alternative.
- The alternatives will also include a range of reasonable operational policies.
- Even though some of the actions in these sample alternatives have specific numbers, these numbers will be represented by a reasonable range in the preferred alternative.

ALTERNATIVE 1A

COMMON PROGRAMS WITH CHANGES IN OPERATIONS

Common Programs ¹				Delta Configuration	Water Storage
Ecosystem Restoration	Water Quality	Water Use Efficiency	Levee System Integrity	Existing channels	
¹ The common programs for each alternative include significant habitat improvements, reductions in water quality parameters of concern before they enter the Bay-Delta system, policies for cost effective measures to improve water use efficiency, and levee improvements throughout the Delta.					

This alternative relies on the common programs with changes in Delta operations to improve each of the resource areas. With no modifications to Delta conveyance and no new storage in the Bay-Delta system, supply improvements for the resource areas will rely primarily on reoperations, conservation, water transfers, and groundwater management. This alternative preserves the Delta common pool in that it provides a common source of fresh water for all users. The impacts on fisheries caused by the export pumps continues, and fish are still drawn into areas where they are subject to delay and predation.

ALTERNATIVE 1C

EXISTING SYSTEM CONVEYANCE

Common Programs ¹				Delta Configuration	Water Storage
Ecosystem Restoration	Water Quality	Water Use Efficiency	Levee System Integrity	Existing channels with South Delta and CVP-SWP Improvements	3.0 MAF upstream 1.0 MAF off-aqueduct 500 TAF Sac. Valley GW 500 TAF San Joaquin GW
¹ The common programs for each alternative include significant habitat improvements, reductions in water quality parameters of concern before they enter the Bay-Delta system, policies for cost effective measures to improve water use efficiency, and levee improvements throughout the Delta.					

This alternative supplements the common programs with an increase in the permitted capacity and flexibility of the south Delta pumps and with storage for multiple uses. South Delta improvements will provide for increasing the permitted capacity pumps up to their physical capacity. These improvements along with state-of-the-art fish screens installed at the pumps will increase operational flexibility to take advantage of windows when fish are less vulnerable. Upstream storage will be used for water supply, to help manage the timing of inflow to the Delta for environmental benefit, and for Delta outflow. Downstream storage, in conjunction with groundwater/conjunctive use, will be used to better manage the timing of Delta exports. This alternative also preserves the common pool in that it provides a common source of fresh water for all users.

ALTERNATIVE 3B DUAL DELTA CONVEYANCE

Common Programs ¹				Delta Configuration	Water Storage
Ecosystem Restoration	Water Quality	Water Use Efficiency	Levee System Integrity	North Delta Channel Improvements, South Delta Improvements, CVP-SWP improvements, and Small (5000 cfs) Isolated Facility	3.0 MAF Upstream (Sac) 500 TAF Upstream (SJ) 2.0 MAF Off-Aqueduct 200 TAF In-Delta 500 TAF Sac. Valley GW 500 TAF San Joaquin GW
¹ The common programs for each alternative include significant habitat improvements, reductions in water quality parameters of concern before they enter the Bay-Delta system, policies for cost effective measures to improve water use efficiency, and levee improvements throughout the Delta.					

This alternative uses extensive new storage and conveyance facilities to complement the common programs and to efficiently move water through and around the Delta. New surface storage upstream, in, and off-aqueduct, and south Delta and CVP-SWP improvements will provide greater flexibility in timing inflows to the Delta and withdrawals from the Delta. Upstream storage will be used for water supply, to help manage the timing of inflow to the Delta for environmental benefit, and for Delta outflow. Off-aqueduct storage, in conjunction with groundwater/conjunctive use, will be used to better manage the timing of Delta exports. Improved conveyance through the Delta and isolated conveyance around the Delta further enhance the system flexibility. State-of-the-art fish screens on the isolated facility and at the south Delta pumps will operate to reduce fisheries impacts. Careful management of the dual system and south Delta improvements will be needed to preserve and improve water quality in the south and central Delta.